

AMENDED CLAIMS

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2005 (02.10.05), original claims 16-18 deleted]

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1. A method for producing perovskite particles of the
formula ABO_3 , wherein A is a metal of lower valency
or a mixture of metals of lower valency and
B is a metal of high valency or a mixture of
metals of higher valency,
characterized by the steps

(a) dissolution of the first metal or of the
mixture of metals A in an anhydrous solvent
or solvent mixture and

(b) reaction of the solution from (a) with an
alkoxide of the second metal or of the
mixture of metals B of the formula $B(OR)_x$
and/or $B(OR)_{x-2}$, wherein x is the valency of
the metal B and R is a linear or branched
alkyl radical having 1 to 30 carbon atoms.

2. The method as claimed in any of the preceding
claims, wherein the metal A is selected from the
group consisting of alkali metals, alkaline earth
metals and transition elements.

3. The method as claimed in claim 2, wherein the
metal A is selected from the group consisting of
the monovalent or divalent metals.

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4. The method as claimed in claim 3, wherein the
metal A is selected from the group consisting of
strontium and barium.

5. The method as claimed in any of the preceding
claims, wherein the metal B is selected from the
group consisting of transition elements and metals
of groups III and IV.

- 5 6. The method as claimed in any of the preceding
 claims, wherein the metal B is selected from the
 group consisting of the tetravalent or pentavalent
 metals.
7. The method as claimed in claim 6, wherein the
 metal B is titanium.
- 10 8. The method as claimed in any of the preceding
 claims, wherein the solvent is selected from
 alcohols, ketones, aldehydes and mixtures thereof.
- 15 9. The method as claimed in claim 8, wherein an
 alcohol or a mixture of an alcohol with a ketone
 and/or aldehyde is used as the solvent.
- 20 10. The method as claimed in any of the preceding
 claims, wherein the alcohol is sterically
 stabilizing alcohol.
11. The method as claimed in claim 10, wherein the
 alcohol is benzyl alcohol.
- 25 12. The method as claimed in any of the preceding
 claims, wherein the metal alkoxide in step (b) is
 titanium isopropoxide.
- 30 13. The method as claimed in any of the preceding
 claims, wherein step (b) is carried out at a
 temperature of from 190 to 220°C.
- 35 14. The method as claimed in any of the preceding
 claims, wherein, in step (b), a 10-100-fold excess
 of the solvent is present.
15. The method as claimed in any of the preceding
 claims, wherein the perovskite particles obtained

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after step (b) have a mean size of 5-10 nm.